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White-breasted Nuthatch 1, 9, 10, 11, 13, 17, 18, 19, 22, 24, 26, 29.
Hairy Woodpecker, 11.
Tree Sparrow, 22, 24.
Snowflake, 8.
Herring Gull, 17.

Total number of species seen, 9.

FEBRUARY.

Birds seen on the dates after their names:

Blue Jay, 1, 3, 9, 11, 17, 18, 20, 24, 28.
Crow, 1 to 5, 7, 8, 9, 11, 13, 14, 15, 17, 19, 20, 21, 24, 25, 27, 28.
Tree Sparrow, 16.
Snowflake, 2, 4, 5.
Snowbird, 1, 2, 3, 6, 7, 8, 11, 13, 16, 17, 18, 27.
Downy Woodpecker, 3, 18, 25.
White-breasted Nuthatch, 1, 3, 6, 8, 11 to 14, 16, 17, 19, 20, 22, 24, 25, 27, 28.
Northern Shrike, 15. Bluebird, 19. Brown Creeper, 24.

Total number of species seen, 10.

MARCH.

Birds seen on the dates after their names:

Blue Jay, 1, 8.
Crow, 1, 4, 5, 7, 8.
White-breasted Nuthatch, 6, 7, 8
Snowbird, 2, 3, 4, 6, 7, 8.
Downy Woodpecker, 8.
Tree Sparrow, 3, 4, 8.

Total number of species seen, 6.

Total number of species seen during the winter, 15.

Comparative Migration of Our Birds in Spring.

BY BROTHER ALPHONSUS, C. S. C.

In the first three years, 7 days were the greatest difference between the earliest and latest arrival of the Bluebird. In 1912, the date given, I think, was not the correct one: for I heard that the species had been seen sooner by other observers. Although I admit that my record was likely later than the true date of migration, still the fact that I did not observe the species until that date indicates that the very cold weather of early spring was the cause of the great scarcity ofthe Bluebird until late in March.

In the four years of our comparison, the greatest difference between the earliest and latest arrival of the Robin was 17 days. The fourth year being the one in which this species was 10 days later than in 1910, and 12 days later than in 1909, the usual time for the Robin to arrive may be set down as the first or second week in March.

The Meadowlark shows as its usual time for arriving in spring the same as that of the Robin, with one late date in 1912. The late arrival in 1912 of all the early spring migrants clearly shows that cold weather is a determining cause of the delay of migrating birds in spring.

The Song Sparrow is quite regular in its time of arrival in spring, the first or second week in March, under usual conditions, always marking its advent. The observer is always sure of his date of migration when referring to this species, for it announces its presence on the very first day of arriving by its well-known song.

The Purple Grackle and Killdeer are two more species that are among the early March migrants, but like the species already mentioned, they will not brave cold weather in order to keep to this regular time of arriving.

The Mourning Dove usually arrives late in March, 15 days being the greatest difference in its time of arriving in the four years under comparison. The first three years show that this species may be looked for either in the third or fourth week in March.

In the Kingfisher, we have a species that shows 17 days as the greatest number between its earliest and latest arrival. The dates of the four years are so distributed as to establish the fact that this migrant may arrive either in the third or fourth week in March, or in the first or second week in April. The observer is quite sure of his dates in speaking of the Kingfisher, for the size of the bird and its aquatic habits make it unlikely that the species will not be seen on the first day of its arrival.

The Phoebe's dates for the four years mark the time of arrival for this species to be the last week in March or the first week in April. The Golden crowned Kinglet also arrived two years in the last week in March and two years in the first week in April.

The Cowbird showed one irregularity in arriving as early as March 16, 1910, while the other three years each give the first week in April as the usual time of migrating. This March date was 17 days sooner than the earliest date in April. Who can give a satisfactory explanation of this irregularity?

In the case of the Vesper Sparrow and the Flicker, the dates show that these species usually arrive in the first week in April and move rarely in the last week in March. On the other hand, the Field Sparrow arrived three years in the last week in March and one year in the first week in April.

The Chipping Sparrow shows irregularity in the two dates in April—the first and the second weeks; but in March both dates are in the last week. In April, the Sapsucker shows great regularity, arriving three years in the second week; the one irregular date was in the last week in March.

The Hermit Thrush arrived two years in the first week in April and two years in the second week, 9 days being the difference between the earliest and latest date. The Brown Thrasher shows a little less irregularity, arriving three years in the third week in April, and having 7 days between the earliest and latest date.

The Purple Finch, in the two years that the bird made its appearance, shows regularity in its dates of arrival; there being but 5 days between the two dates.

The Towhee presents a case of great irregularity in migrating, there being no two years when the bird arrived in the same week. The greatest difference in the dates was 29 days.

The Barn Swallow came one year in the second week in April, another year in the third week, and in the remaining two years in the fourth week, the greatest difference between the earliest and latest date being 14 days.

The Red-headed Woodpecker shows the greatest disparity in its dates of migration of any species under consideration, 39 days being the difference between the earliest and latest date of arrival. The four dates are variously distributed in the third week, in March, first, second and fourth weeks in April.

The Red-winged Blackbird's dates present great differences, but I am sure that the date for 1909—April 20—can not have been the correct time of arrival. This species is usually found only in swampy places and unless such a place is visited, the observer may not see the bird until long after its arrival. The true time of migration for the Red-wing must, therefore, be set down as the first or second week in March.

The dates found in the four years show for the Myrtle Warbler a migration period of 16 days, and make the time of arrival as early as the third week in April and as late as the first week in May. The Ruby crowned Kinglet is still more irregular, with 22 days as the greatest difference in the earliest and latest dates of migration. The second and fourth weeks in April and the first week in May were the times of arrival for this species.

The Cardinal is really not a migrating species, but is very locally distributed at every season of the year, especially in winter. Unless the observer visits a river or swamp, he may fail to find a single individual for months together. During the spring of 1913, I head the Cardinal's note only on one occasion—when I went to the St. Joseph River early in May.

The House Wren, Yellow Palm Warbler, Chimney Swift, Yellow Warbler, Baltimore Oriole, Rose-breasted Grosbeak, Warbling Vireo, Orchard Oriole, Kingbird, Black-throated Blue Warbler, Catbird, Bobolink, Purple Martin, Bay-breasted Warbler, Canadian Warbler, Least Flycatcher, Red-eyed Vireo, Cedarbird and Yellow-billed Cuckoo—all show regularity in their dates of migration, there being not more than 8 days between the earliest and latest date of arrival.

The Indigo Bird arrived, in the four years, in the first, second and third weeks of May, with the greatest difference 12 days. The Maryland Yellowthroat arrived in the second and fourth weeks of May. The Redstart came the last week in April and the first and second weeks in May, with 17 days between the earliest and latest date.

The Dickcissel arrived two years in the second week in May and one year in the third week, no record of the species having been made at any time in 1912. This bird, like the Purple Finch, does not appear some years.

The Nighthawk and Whip-poor-will show irregularity in their times of migration. In the case of the latter species, however, I think my dates are not correct; for my observations in spring were made in woods near a town, which this migrant does not enter, except rarely. I should put the true time of arrival, from what reports I have heard, as the first week in May.

	1909	1910	1911	1912
Bluebird	Mar. 1	Feb. 22	Feb. 23	Mar. 25
Robin	“ 2	Mar. 4	“ 25	“ 14
Meadowlark	“ 5	“ 6	Mar. 9	“ 19
Song Sparrow	“ 6	“ 5	“ 9	“ 22
Purple Grackle	“ 7	“ 6	“ 9	“ 19

	1909	1910	1911	1912
Killdeer	Mar. 9	Mar. 4	Mar. 9	Mar. 14
Mourning Dove	" 19	" 28	" 24	Apr. 3
Kingfisher	Apr. 3	" 30	" 22	" 8
Phoebe	" 3	" 29	" 22	" 2
Cowbird	" 5	" 16	Apr. 2	" 6
Vesper Sparrow	" 5	" 26	" 9	" 1
Flicker	" 5	" 24	" 5	" 10
Field Sparrow	" 6	" 25	Mar. 21	Mar. 31
Golden-crowned Kinglet	" 7	" 30	" 22	Apr. 6
Chipping Sparrow	" 10	" 29	" 30	" 5
Sapsucker	" 11	" 26	Apr. 11	" 12
Hermit Thrush	" 13	Apr. 4	" 11	" 5
Purple Finch	" 14		" 9	
Brown Thrasher	" 17	" 10	" 16	" 15
Towhee	" 17	Mar. 19	" 8	" 2
Hell Diver	" 19	" 31	" 27	
Barn Swallow	" 19	Apr. 27	" 26	" 13
Red-headed Woodpecker	" 20	" 4	Mar. 18	" 26
Red-winged Blackbird	" 20	Mar. 5	" 9	" 2
Myrtle Warbler	" 20	May. 2	Apr. 26	" 16
Cardinal	" 20	Apr. 7	May 7	Mar. 18
Ruby-crowned Kinglet	" 22	" 10	Apr. 25	May 2
House Wren	" 23	" 28	" 29	" 3
Yellow Palm Warbler	" 26	May 3	" 30	" 5
White-crowned Sparrow	" 27			
Chimney Swift	May 3	" 8	May 3	" 1
Wilson's Thrush	" 3			
Yellow Warbler	" 5	" 2	Apr. 27	May 3
Baltimore Oriole	" 5	" 2	May 3	" 2
Rose-breasted Grosbeak	" 5	" 8		" 13
Indigo Bird	" 5	" 17	May 17	" 14
Warbling Vireo	" 6	" 3	Apr. 30	Apr. 30
Orchard Oriole	" 7	" 10	May 8	May 4
Kingbird	" 8	" 4	Apr. 30	" 2
Black-throated Blue Warbler	" 9			" 4
Goldfinch	" 11	Apr. 2	Apr. 6	Mar. 21
Catbird	" 7	May 7	May 2	May 2
Maryland Yellowthroat	" 11	" 11	Apr. 27	
Redstart	" 12	" 4	" 25	May 3

	1909	1910	1911	1912
Bobolink	May 13	May 14	May 7	May 13
Purple Martin	" 13	" 8	" 7	
Blackburnian Warbler	" 13			May 3
Scarlet Tanager	" 19	May 10	May 15	" 2
Bay-breasted Warbler	" 19	" 16		" 13
Dickcissel	" 19	" 12	May 10	
Least Flycatcher	" 22	" 14		May 22
Canadian Warbler	" 24			" 19
Tennessee Warbler	" 24			" 3
Wood Pewee	*	May 20	May 10	May 6
Crested Flycatcher	May 27	May 10	May 10	" 6
Nighthawk		June 3	May 1	" 19
Yellow-throated Vireo		May 4		" 19
Red-eyed Vireo	*	" 21	May 17	May 19
Warbling Vireao	*	" 3	Apr. 30	Apr. 30
Alder Flycatcher	May 25	" 12	May 28	May 20
Least Flycatcher	" 22	' 18		May 22
Cedarbird	" 27	June 1	May 31	" 24
Whip-poor-will		" 15	May 8	" 26
Yellow-billed Cuckoo	May 28	May 30	" 20	" 27

* Record lost.

Linnaea americana in Indiana.

Linnaea americana Forbes is regarded a decidedly more northern plant than would be expected in our flora. Its presence in a bog at the lower end of Lake Michigan near Mineral Springs (Porter Co.), where I found it this fall, may be accounted for by the fact that the prevailing cold winds from the north that built the dunes make the region somewhat boreal. Other more northern plants associated with it are *Cornus canadensis* Linn. and *Thuja occidentalis* Linn. Of the latter there are still some trees over twelve inches in diameter, and a rather good growth of saplings.

For *Apocynum tomentellum* Nwd. Am. Mid Nat. III., p. 55, substitute *Apocynum tomentulosum.* There was another plant of that name, Greene E. L. Leaflets etc. Vol. I. p. 58.